CLAIMS

What is claimed is:

1. A method to operate a spread spectrum receiver with an active set of base stations, comprising:

monitoring a current serving base station of the active set with a first set of fingers; and

simultaneously monitoring individual ones of remaining base stations of the active set, where one of the remaining base stations is designated as a Candidate base station for potentially replacing the current serving base station and is monitored continuously by a second set of fingers, and where the other remaining ones of the base stations of the active set are monitored in a time multiplexed manner by a third set of fingers.

2. A method as in claim 1, further comprising:

detecting that one of the remaining ones of the base stations of the active set is received with a stronger signal than the Candidate base station; and

designating the detected one of the base stations as a new Candidate base station, and beginning the continuous monitoring of the new Candidate base station while monitoring the other remaining ones of the base stations of the active set, including the previous Candidate base station, in the time multiplexed manner.

3. A method as in claim 1, where individual ones of the other remaining ones of the base stations of the active set are monitored for a predetermined period of time.

4. A method as in claim 3, where the predetermined period of time is about 100 ms.

5. A method as in claim 1, where only a Pilot channel of the individual ones of remaining base stations of the active set are monitored.

6. A method as in claim 1, where only the Pilot channel of the individual ones of remaining base stations of the active set are demodulated for the Candidate base station and for a currently selected one of the other remaining ones of the base stations of the active set.

7. A method as in claim 1, where the second set of fingers is used to obtain an average carrier to interference ratio of the remaining base stations of the active set for use in making a cell selection decision.

8. A method as in claim 1, where the second set of fingers is used to obtain an average carrier to interference ratio of the remaining base stations of the active set for use when identifying a target cell during a packet data call.

9. A spread spectrum receiver operable with an active set of base stations, comprising:

a first bank of demodulators comprising a Set Searcher for monitoring a current serving base station of the active set; and

a second bank of demodulators comprising a C/I Searcher for simultaneously monitoring individual ones of remaining base stations of the active set, where one of the remaining base stations is designated as a Candidate base station for potentially replacing the current serving base station and is monitored continuously by a first set of fingers of the C/I Searcher, and where the other remaining ones of the base stations of the active set are monitored in a time multiplexed manner by a second set of fingers of the C/I Searcher.

10. A spread spectrum receiver as in claim 9, further comprising circuitry for detecting that one of the remaining ones of the base stations of the active set is received with a stronger signal than the Candidate base station and for designating the detected one of the base stations as a new Candidate base station so as to begin the continuous monitoring of the new Candidate base station while monitoring the other remaining ones of the base stations of the active set, including the previous Candidate base station, in the time

multiplexed manner.

11. A spread spectrum receiver as in claim 9, where individual ones of the other remaining ones of the base stations of the active set are monitored for a predetermined period of time.

12. A spread spectrum receiver as in claim 9, where the C/I Searcher demodulates only a Pilot channel of the individual ones of remaining base stations of the active set.

13. A spread spectrum receiver as in claim 9, where the C/I Searcher demodulates only the Pilot channel of the individual ones of remaining base stations of the active set using a plurality of fingers for demodulating the Candidate base station and another plurality of fingers for demodulating a currently selected one of the other remaining ones of the base stations of the active set.

14. A spread spectrum receiver as in claim 9, where the C/I Searcher demodulates only the Pilot channel of the individual ones of remaining base stations of the active set using a plurality of fingers for demodulating multi-paths of the Candidate base station and another plurality of fingers for demodulating multi-paths of a currently selected one of the other remaining ones of the base stations of the active set.

15. A spread spectrum receiver as in claim 9, where the C/I Searcher is used to obtain an average carrier to interference ratio of the remaining base stations of the active set for use in making a cell selection decision.

16. A spread spectrum receiver as in claim 9, where the C/I Searcher is used to obtain an average carrier to interference ratio of the remaining base stations of the active set for use when identifying a target cell during a packet data call.

17. A method to operate a mobile station that is compatible with a 1xEV-DV spread spectrum protocol, comprising:

during a packet data call, monitoring a current serving base station of an active set of base stations with a Set Searcher;

simultaneously monitoring individual ones of remaining base stations of the active set with a C/I Searcher, where one of the remaining base stations is designated as a Candidate base station for potentially replacing the current serving base station and is monitored continuously by a first set of fingers of the C/I Searcher, and where the other remaining ones of the base stations of the active set are monitored in a time multiplexed manner by a second set of fingers of the C/I Searcher; and

in response to detecting that one of the remaining ones of the base stations of the active set is received with a stronger signal than the Candidate base station, designating the detected one of the base stations as a new Candidate base station, and beginning the continuous monitoring of the new Candidate base station while monitoring the other remaining ones of the base stations of the active set, including the previous Candidate base station, in the time multiplexed manner.

18. A method as in claim 17, where the C/I Searcher is operated to obtain an average carrier to interference ratio of the remaining base stations of the active set for use during a target cell selection procedure during the packet data call.

19. A method as in claim 17, where the C/I Searcher uses a delay lock loop (DLL) for time tracking individual base station multi-paths.